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Brownian Motion of an Ellipsoid in Correlated Fluids SHAOQING ZHANG, University of Pennsylvania, WU-PEI SU, University of Houston — To account for the correlation in the fluctuation force due to the surrounding media, we analytically study the diffusive behavior of an anisotropic Brownian particle by introducing an exponentially correlated colored noise in the rotational motion. The crossover from anisotropic to isotropic diffusion slows down, and the increase in the translational diffusion coefficient induced by an external force is enhanced. These results are of great interest in the research on biological physics and soft matters.

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